CLAIMS

Please **ADD** claims 38 and 39 as set forth herein.

A listing of the claims (including status identifiers) is provided below.

Claims 1-18 (Canceled)

19. (previously presented) A magnetron coating system, comprising:

a first coating source;

an auxiliary substrate arranged between the first coating source and an area into which a substrate to be coated is to be received;

a magnetron having a cathode composed of the auxiliary substrate; and

a device structured and arranged to determine an area density of the auxiliary substrate.

20. (previously presented) The magnetron coating system according to claim 19, wherein the auxiliary substrate is formed as a cylinder, and the magnetron comprises a rod cathode magnetron.

21. (previously presented) The magnetron coating system according to claim 19, wherein the first coating source comprises a planar magnetron.

22. (previously presented) The magnetron coating system according to claim 19, wherein the first coating source comprises a shield.

23. (previously presented) The magnetron coating system according to claim 19, wherein the device comprises a detection device structured and arranged to determine x-ray fluorescence.

24. (previously presented) The magnetron coating system according to claim 19, further comprising additional auxiliary substrates, wherein the magnetron comprises additional cathodes composed of the additional auxiliary substrates.

25. (previously presented) A method for depositing thin layers, comprising:

depositing a layer on an auxiliary substrate via a first coating source;

coating a substrate via a magnetron having a cathode composed of the auxiliary substrate; and

determining an area density of the auxiliary substrate.

26. (previously presented) The method of claim 25, wherein a thickness of the layer deposited on the auxiliary substrate is less than 100 nm.

27. (previously presented) The method of claim 26, wherein the thickness of the layer deposited on the auxiliary substrate is less than 10 nm.

28. (previously presented) The method of claim 25, wherein the layer deposited on the auxiliary substrate comprises a metal layer.

29. (previously presented) The method of claim 28, wherein the metal layer comprises an element having a higher mass number than an average mass number of a material of the auxiliary substrate.

30. (previously presented) The method of claim 25, further comprising:

operating the first coating source as an other magnetron with inert gas; and

operating the magnetron with at least one of the inert gas and reactive gas.

31. (previously presented) The method of claim 30, wherein at least one of the following:

the inert gas comprises argon, and

the reactive gas comprises at least one of nitrogen, oxygen, and methane.

32. (previously presented) The method of claim 25, wherein the area density of the auxiliary substrate is determined after the coating of the substrate.

33. (previously presented) The method of claim 25, wherein the determining of the area density of the auxiliary substrate comprises x-ray fluorescence.

34. (previously presented) The method of claim 25, further comprising operating the magnetron with DC voltage or pulsed DC voltage.

35. (previously presented) The method of claim 25, wherein the cathode comprises several cathodes and the method further comprises operating the magnetron with the several cathodes with a frequency of approximately 10 kHz to approximately 100 kHz.

36. (previously presented) The method of claim 25, wherein the coating of the substrate comprises depositing an other layer on the substrate.

37. (previously presented) The method of claim 36, wherein the other layer comprises titanium dioxide.

38. (new) The method of claim 25, further comprising:

determining a deposition rate in a plasma area between the first coating source and the auxiliary substrate, and

after the determining the area density of the auxiliary substrate, determining an area density of the substrate from a mass balance of the auxiliary substrate.

39. (new) The magnetron coating system according to claim 19, wherein:

the device determines the area density of the auxiliary substrate at a location behind a plasma area between the auxiliary substrate and the substrate to be coated with respect to a direction of rotation of the auxiliary substrate,

the location is before a plasma area between the first coating source and the auxiliary substrate with respect to the direction of rotation of the auxiliary substrate, and

the device comprises an x-ray source that irradiates the auxiliary substrate at the location and a photodetector that determines x-ray radiation reflected from the auxiliary substrate.